

## **LESSONS LEARNED FROM ADVOCATING CSAs FOR LOW-INCOME AND FOOD INSECURE HOUSEHOLDS\***

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### **ABSTRACT**

This paper reports on the lessons learned from a project designed to connect local small-scale farmers with low-income households in the Piedmont Region of central North Carolina. Community Supported Agriculture (CSA) arrangements were used to assist farmers by prepaying for fresh farm products. Building community through alternative food systems and civic agriculture underlies the project design of this CSA project. Payments to farmers were made by North Carolina's food policy council. Selected low-income households received CSA shares of farm fresh products. Results focus on access to local, farm fresh products, changes in cooking practices of the CSA participants, as well as a sense of community established around food and food access with farmers and others as part of a social food network.

### **Introduction**

Having visited and worked for several years among farmers and at farmers markets in different settings in the United States, it became apparent that not everyone had equal access to fresh farm products regularly. Struck by the continued support of local farmers markets and for the farmers and their families, something seemed amiss as to the population seen frequenting many markets. A missing group was most often the low-income and food-insecure community members, who for various reasons were not regular members of this social food network. An obvious

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question that came to us was how to make farm-fresh commodities available to people much in need of quality food. What would it take to introduce fresh eggs, lettuce, and vine-ripened tomatoes to food-insecure low-income households who lacked the resources to obtain them?

Therefore, this paper tells the story of how a group of dedicated researchers worked with the farming community to develop a social food network that would include the poor and the hungry. We outline how the project came to fruition, the funds needed to operate the project, and the lessons learned from working with a diverse group of people who might not otherwise have come together around food and food sharing.

Project Green Leaf (PGL)<sup>1</sup> was established to provide assistance to small-scale farmers in North Carolina. In this paper we describe a program designed to expand that assistance to include both small-scale farmers and low-income, food-insecure households in the Piedmont region of North Carolina by bringing these two groups together in Community Supported Agriculture (CSA) arrangements. In a CSA, a farmer is prepaid in the winter months for his or her harvests by a consumer who will in turn receive a share of the future harvest. Although some have suggested that CSAs are inherently elitist (DeLind 1999, 2002; Ostrom 1997), our project demonstrates that this is not necessarily the case. Moreover, we show that social networks established around food can reach a wide-range of people and create a sense of community among low-income households and farmers.

Several questions guided this project and served to shape our approach to reducing household food insecurities by providing access to farm fresh produce. We asked: Could a CSA arrangement be designed to reach low-income households? How would low-income households benefit from participating in a CSA arrangement? How would farmers with CSAs benefit from such an arrangement? Would new relationships be forged between farmers and their low-income shareholders? The problem of food and low-income households is a complex one. Nevertheless, steps need to be taken to improve food insecure low-income households' access to fresh produce and their knowledge of how to use these foods while staying within their budgets.

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<sup>1</sup>Since 2000 Project Green Leaf has been located at The University of North Carolina at Greensboro in the Department of Anthropology. Researchers at PGL have been supported by internal and external funding to engage in community development projects among farmers and fishermen in North Carolina. Prior to this project PGL staff members had been working among small-scale commercial farmers and the public, educating on direct marketing opportunities and establishing mid-week farmers markets.

Increasingly, competition from industrial agriculture and food imports make it a difficult challenge for small-scale farmers and family-labor farms to produce and market so they maintain a livelihood and sustain their farms. Our challenge was to design a project to bring these two groups together in a meaningful way. We asked whether alternative food institutions could be used by small-scale farmers to increase their market share by selling to low-income households who might not have considered a farmers market as their source for fresh fruits and vegetables. In this scenario we anticipated that farmers would benefit from selling to a new population and by building community with a wider net around food and food access. We anticipated there would be benefits to low-income households who would be provided with an easier and regular access to fresh, local farm produce.

### **Background for Engaging in this Project**

Scientific advances in industrial agriculture aimed at feeding the world have had mixed results (Buttel 2005; Goodall, McAvoy, and Hudson 2005; Heffernan and Constance 1994; Kimball 2002; Lyson 2004; Lyson and Guptill 2004; Nestle 2002, 2003; Shiva 2000; Smith 2003). Conventional agriculture, a commodity approach to global, industrial agriculture, has displaced farmers, compromised the environment, increased poverty and reduced genetic biodiversity (Halweil 2000; Schlosser 2002; Shiva 2000). Although innovations have improved the bottom lines of many agribusinesses, widespread food insecurity among the world's population persists. In 2001-2003 the FAO reported that more than 850 million people remain undernourished, 820 million in developing countries, 25 million in transition countries and 9 million in the industrialized countries (FAO 2006).

In the industrialized world, most food is sold in supermarkets owned by multinational corporations, which consequently influence what is grown, how it is raised, and who is involved in the many facets of its production, distribution and consumption. Competition from industrialized agricultural practices and agribusiness's corporate marketing has made it challenging for small-scale farmers to grow and sell their fresh farm products, either locally or globally. Globalization and industrial agriculture have displaced farmers and farm land for the past century. According to a study conducted by the USDA in 1997, fewer than half the 6.8 million farms in business in the U.S. in 1935 were still operating in 1964. By 2002 the number of farms in operation had fallen to 1.9 million (Norberg-Hodge, Merrifield, and Gorelick 2002). Halweil (2002) points out in "Home Grown: The Case for Local Food in a Global Market," there are several disadvantages involved in buying from the "global vending machine." For example, a tremendous amount

of energy is consumed by shipping food long distances. Produce grown by the typical agribusiness travels an average of 1000 to 1300 miles before it reaches our tables (Cook and Rodgers 1997; Schlosser 2002). According to Halweil (2002), the typical diet of meat, grains, fruits and vegetables bought in a supermarket can easily consume four times as much energy and produce four times as much greenhouse gas emissions as the same diet grown locally. Foods that require longer transport need more additives and preservatives to keep them fresh and there is a greater chance they will be exposed to contagions along the way (Halweil 2002). In this type of agri-food system the connection between the consumer and the source of their food is lost on the road from farmer to store, leaving consumers disconnected from where, how and by whom their food was grown.

Local seed varieties, cuisines, and farming practices are disappearing under global agricultural process. Seasonality is no longer considered a problem in a world where you can get strawberries and sweet corn in January. Some nutritionists have reported that locally grown, seasonal produce is the healthiest available. Nutrients are gradually lost after harvesting because the foods are picked days or weeks before they reach the table (Norberg-Hodge et al. 2002). With the fertilizers, pesticides, herbicides, and genetically modified seeds involved in large-scale commercial agriculture, the health of the public and those who work the fields are potentially at risk (Nestle 2002; Shiva 2000).

### **Alternative Food Institutions**

Unable to compete with industrialized agriculture in both yield and price, small-scale commercial farmers have turned to direct marketing as a niche that large-scale businesses cannot exploit (Andreatta 2006; Andreatta and Wickcliffe 2002; Lyson 2004; Lyson and Gupthill 2004). As a result, alternative food institutions emerged as a way for the small-scale farmer to sell directly to the public and create a local agricultural food system (Guthman, Morris, and Allen 2006). "A variety of formats come under the rubric, including urban farms, food policy councils, and alternative education programs" (Guthman et al. 2006:662). Farmers markets, CSAs and other forms of direct marketing, such as roadside stands, tailgates, u-pick operations, also fall under this rubric and CSAs are an especially helpful marketing strategy for small-scale commercial farmers (Andreatta 2000; Cone and Myer 2000; DeLind 2002; Goland 2002; Grey 2000; Henderson and van En 1999; Lyson 2004; Ostrom 1997). However, one assumption inherent in alternative food systems is that consumers have access or can afford to eat fresh local produce regularly (Drewnoski and Barratt-Fornell 2004; Neault et al. 2005). Several examples illustrate the point

for us. For example, not all farmers markets are near public transportation; an additional taxi ride might be too much for low-income households. Second, the operating hours of some direct marketing venues such as u-picks, farmers markets, tailgates may conflict with work schedules for those who are employed at two and three jobs or working a night shift.

### **Civic Agriculture**

Lyson (2000; 2004) and DeLind (2002) introduced the concept of civic agriculture as a way to understand food as more than just a commodity. Civic agriculture, according Lyson (2004:1-2), “is a sustainable alternative to the socially, economically, and environmentally destructive practices that have come to be associated with conventional agriculture.” The emphasis is placed on community and community-based agricultural activities that give consumers farm-fresh locally produced products. Civic agriculture generates local employment, encourages entrepreneurship, strengthens community identity and creates relationships around agricultural products and food production, while increasing a community’s agricultural knowledge by directly linking consumers and producers (Lyson 2004). “Civic agriculture brings together production and consumption activities within communities and offers consumers real alternatives to the commodities produced, processed and marketed by large agribusinesses today” (Lyson 2004:1-2). However, for DeLind (2002) the real emphasis is on building community and social networks around food access. Farm fresh produce or food is no longer seen just as a commodity but as part of a relationship. For example, connecting rural farmers and urban eaters establishes linkages between the two groups, forging ties that are mutually dependent and copasetic.

Alternative food institutions have both advocates and critics. Direct marketing approaches are a challenge for both farmers and consumers. For farmers, critics point out the limited volume that can be sold through direct marketing venues such as farmers markets, CSAs, u-picks, etc. Proponents of direct marketing highlight how more of a dollar stays with a farmer given the lack of intermediaries involved in the distribution process (Guthman et al. 2006) and still others stress the social relationships that can be created around food (DeLind 2002; Lyson 2004). One frequent critique of farmers markets or CSAs is that fresh local agricultural products cost more, resulting in a boutique food system for those who can afford to make these purchases (Drewnowski and Barratt-Fornell 2004; Guthmen et al. 2006). According to this critique, alternative food institutions are not relevant to the concerns of low-income groups.

### **The Food Insecure**

For many United States residents feeding one's family is a constant struggle (Drenowski and Barratt-Fornell 2004; Perry and Emerson 2007; Rosenbaum 2007). Those who are working at two and sometimes three minimum wage jobs (with no benefits) find it difficult to make ends meet and often struggle to provide food and shelter. Families with an annual income below 185% of the poverty line in 2002 were six times as likely to be food insecure and hungry (USDA 2002). Food insecurity refers to households "where the availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited or uncertain" (USDA 2002). In 2002 the U.S. Department of Agriculture reported 11% of U.S. households were food insecure, meaning that 33.6 million people (20.9 million adults and 12.7 million children) lived in food-insecure households; they were unable to acquire enough food to feed their families because of limited budgets or lack of other resources. "The number of food-insecure households increased 9.4% from 10.5 million in 1999 to 11.5 million in 2001, up from 31 million people in 1999" (USDA 2002).

Another study found that even some middle- and high-income households experienced food insecurity at some point during the year due to uneven income, changes in household composition or multiple economic units residing in the house (Nord and Brent 2002). Sudden unemployment, health problems, divorce or other unforeseen events can cause these families to struggle with hunger. Nearly 6% of elderly households were also finding it difficult to meet their basic food needs (Lee and Frongillo 2001).

Rising numbers of Americans and US residents are turning to overwhelmed emergency food assistance programs for help with feeding their families. According to the U.S. Conference of Mayors (2002), there was a 19% increase in the need for public assistance in major cities between 2001 and 2002, at the time when this project was under taken. In 2001, 23.3 million Americans nationwide sought and received emergency hunger relief from the Second Harvest charitable network, an increase of nearly two million from 1997. Eighty percent of affiliated food banks and food rescue organizations have seen an increase in demand since 2001 (America's Second Harvest 2007).

There are many new faces in the food lines due to the weakened economy and job losses since the attacks of September 11, 2001. Low-income households with members working full-time are finding it difficult to pay for housing and medical costs while still avoiding hunger (Lieberman 2003). Many jobs available are only paying minimum wage and families are struggling to survive on \$6 to \$7 an hour,

sometimes with no benefits. These people are the working poor and their numbers are growing.

The North Carolina job market has been especially devastated by the sagging economy. Textile plants, apparel and furniture factories, and tobacco companies are closing down at an alarming rate (recent examples include Pillow Tex, Slane Hosiery, VF Jeansware, Hooker Furniture, Brown and Williamson Tobacco) and thousands of jobs have been lost to foreign competition. Peter Neenan, director of labor market information for the Employment Security Commission, states that “a year ago, or even as late as this past spring [i.e., Spring 2002], we had the third-highest unemployment rate in the country” (Maley 2003:26). The U.S. Department of Labor reports that the unemployment rate for North Carolina was 6.2% in December, 2003 that places it above the national average of 5.7% for the same period (U.S. Department of Labor 2003).

When our project was conducted, the South was found to have the highest rate of food insecurity in the country: 12.4% compared with the West (12.1%), Midwest (9.6%) and Northeast (9.2%) (Nord, Andrews, and Carlson 2003). According to the Food Insecurity Institute, North Carolina had previously been ranked 30<sup>th</sup> with a food insecurity rate of 10% in a study conducted between 1998 and 2000 (Sullivan and Choi 2002). From 2000-2003 food insecurity rates increased and North Carolina was in the top fifteen among states experiencing the highest rates of food insecurity in the United States (Nord et al. 2003).<sup>2</sup>

### **Food Access**

A variety of local, state and federal programs are in place to assist low-income families or individuals in meeting some of their food needs. Federal assistance programs such as the Food Stamp Program (FSP), the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), the Farmers Market Nutrition Program (FMNP) and the National School Lunch Program provide food access to households meeting certain eligibility requirements. Food pantries and emergency kitchens, part of the Emergency Food Assistance System, are run by private organizations with some Federal support (Briefel et al. 2003).

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<sup>2</sup>In updating the background information for this paper it is noted that North Carolina is now in the top ten states in prevalence of food insecurity. Rather than improving with time the conditions have worsened. The average for 2003-2005 is the following: U.S. 11.4%, NM 16.8%, MS 16.5%, TX 16.0%, SC 15.5%, AR 14.7%, OK 14.6%, UT 14.5%, ID 14.1%, NC 13.2%, TN 13.0% (USDA. Mark Nord, M. Andrews, S. Carlson. *Household Food Security in the United States, 2005*).

The Food Stamp Program offers monthly allotments in the form of electronic benefit transfer cards presented at participating places (Dollahite et al. 2005). These allotments are for the purchase of breads, cereals, fruits, vegetables, meats, fish, poultry, and dairy products (USDA 2003a). The WIC program provides assistance to pregnant or postpartum women, infants and children up to the age of five years in families at or below 185 percent of the U.S. Poverty Income Guidelines. WIC coupons can only be used to purchase milk, eggs, cheese, fruit juice, cereal and formula (USDA 2003b).

In some states WIC also offers a Farmers Market Nutrition Program (FMNP) designed to provide fresh, locally grown fruits and vegetables to WIC recipients while helping improve awareness of, use and sales of farmers markets (USDA 2003b). The FMNP is a federal-state partnership designed to provide locally grown produce to low-income households at nutritional risk and to expand their awareness of local produce sold at farmers markets. The FMNP became a federally-sponsored program in 1992 under the WIC Farmers Market Nutrition Act and is fully functioning in 36 states including North Carolina (Dollahite et al. 2005). “The FMNP provides checks to families enrolled in the Special Supplemental Nutrition Program for Women, Infants and Children. These checks can be used to purchase local produce at participating farmers markets” (Dollahite et al. 2005:340). FMNP offers low-income households increased access to fresh produce, although it requires dual sponsorship—states have to participate to receive federal funds. Dollahite et al. (2005) found in their research that “FMNP positively impacts both the dietary intake of nutritionally at-risk individuals and the revenue of participating farmers” (Dollahite et al. 2005:340). Farmers also benefit from the FMNP programs, both from the face value of the coupons presented and from any additional sales made at the same time. However, state funding needs to be in place for the program to qualify for federal dollars. At the time of this study North Carolina had declined for the second year in a row to participate in the program. Without this mechanism in place, NC low-income households lacked both financial assistance and the incentive to go to a farmers market in search of fresh produce that they could buy with a voucher.

In a study conducted by the USDA on the shopping practices of food-stamp recipients, over half the respondents said they could not afford to feed their families a balanced diet (Nord 2003). Low-income families often believe that eating healthier is more expensive while admitting their awareness of the need for a better diet (Bradbard et al. 1997; Drewnowski and Barratt-Fornell 2004; Hoisington, Shultz, and Butkus 2002). Most food insecure households avoided hunger by buying just

a few basic items, thus decreasing the variety in their diets, or by drawing on federal food assistance programs or food pantries (Nord and Andrews 2000). In addition, low-income families have a difficult time with shopping due to transportation problems and lack of time to shop (Hamilton et al. 2001). Low-income families may not be able to afford public transportation, let alone own and maintain a vehicle. Given the varied work schedules of some low-income families, food shopping and cooking from scratch may be thought to be insurmountable obstacles.

For some households the priorities are such that foods are chosen based on conveniences, despite their more expensive price tag and lower nutritional value. In one study, a food-stamp recipient stated “if you’re feeling really tired after returning from work you don’t want to fix a meal that takes thirty pans. You just want something quick and easy and as simple as possible” (Bradbard et al. 1997:7). Bradbard et al. also found that most food-stamp recipients spoke more often of food quantity, saying their most important goal was to keep the family from complaining they are still hungry. It is not that families do not understand the need for a more nutritious diet, but that they probably cannot put it into practice (Allen 1999; Bradbard et al. 1997; Devine et al. 2003; Drewnowski and Barrett-Fornell 2004; Hoisington et al. 2002; and Hamilton et al. 2001).

Commonly low-income families understand what needs to be done to improve the diets of their families. However, they find it difficult with their limited resources (i.e., time and capital) to make it happen. As one young woman illustrates “We’re just so tied down with time. We don’t have it; I don’t have the luxury my grandmother did. She could be home all day planning the dinner, she could go shopping in the morning and get stuff very fresh, go home and cook it and have time to watch soap operas and it’s like I don’t have that luxury. I have to work; I have to go to school” (Devine et al. 2003:621).

Cultural and ethnic preferences may be just as important as economics and income in determining how households spend their food dollars. Culturally appropriate and familiar foods are on the shopping lists and the cooks in these homes in take pride in the skills learned from their own mothers (Bradbard et al. 1997). However, some cultures do not consider fresh fruits and vegetables a top priority in their food selection. Efforts to change shopping habits are often met with resistance from cooks who report that changing the diet of their family is difficult. Bradbard et al.’s study on food choices in low-income families found that many households admitted that they cater to the wishes of the children and often put the wishes of the family before their own. Accordingly, participants in their study stated it did not make sense to buy things the children would not eat, which in turn

influenced them to buy “junk food” and brand name items that were more expensive and loaded with salt, sugar, and fat (Bradbard et al. 1997).

When we undertook this project in 2002-2003 little had been written on actual community projects designed to enable low-income households to participate in alternative food institutions. Our challenge was to make fresh local produce available to low-income, food-insecure households despite their limited resources of time, capital, access, knowledge etc. We turned to CSA arrangements as a possible solution.

### **Community Supported Agriculture**

Community Supported Agriculture is a form of civic agriculture that started in Japan in the 1960s. The movement called “teikei” (literally “face to face”) was a way of connecting people back to the source of their food (Andreatta 2000; DeLind 1999; Goland 2002; Henderson and van En 1999; Ostrom 1997; Wells and Gradwell 2001). CSA arrangements take on many forms that aid small-scale farmers in their farm plans and marketing strategies. They vary according to “their labor and financial commitments of their members, their decision making structures, ownership arrangements, methods of payment and food distribution” (Lyson 2004:88) and varieties and quantity of food provided (Andreatta 2000; Gibson 1994; Goland 2002). [For greater detail on the various types of CSA arrangements see Henderson and van En 1999; Lyson 2004.] However, all CSAs have two main characteristics in common: commitment by farmers and their CSA members to supporting a local and just food system, and the responsibility they share in stewarding the earth both ecologically and socially by sharing in the risks and benefits of the seasonal harvest.

In some CSAs, the consumer pays a fixed price (typically \$300 - \$600) to the farmer up-front for a share in the farm’s harvest, and becomes a “member,” “shareholder” or “subscriber” of the farm. Typically, a share provides enough fresh produce weekly to supply a household of four for 2-3 days. In exchange for the shareholder’s portion of the seasonal harvest, the farmer receives payment to cover the cost of the harvest futures at a time of the year when there is often no income coming into the farm and also receives capital to cover the cost of seed, soil amendments and other expenses. By pre-selling, farmers are guaranteed a fair market price and steady customers over the season.

Some CSA farmers also have a core group of members that assist in a variety of tasks, such as harvesting, packing, and distribution (Henderson and van En 1999). Shareholders may volunteer to be on a work schedule that requires their presence

weekly, monthly or by farm project, depending how the farmer has arranged the CSA. However, for some farmers the inexperienced shareholder becomes an added burden rather than an additional source of labor (Andreatta 2000; DeLind 1999). Farmers who do not have reliable or experienced CSA shareholders prefer to do the work themselves, from planting to harvesting, to sorting, bagging and distributing the harvest shares. Members of these CSAs are frequently called “subscribers,” for they receive their weekly share of fresh produce much as they would a magazine subscription. There are challenges with CSA arrangements that have subscribers, the biggest being subscribers forgetting to pick up their share bag (Andreatta 2000; DeLind 1999).

All being well on the farm, a subscriber or shareholder receives a weekly share of fresh farm produce for a set number of weeks over the spring, summer, and fall seasons. Besides vegetables and fruit, some CSA farmers also offer other items such as flowers, eggs, meats and poultry, dairy products, baked goods and honey. Shareholders share in the bounty of the farm but also in the risks associated with farming.

CSAs have been critiqued as an elitist food distribution system because they require shareholders to pay months in advance for their food. Low-income households with limited budgets are very unlikely to be able to pay in the winter for produce they will not receive until the spring. Those who can pay in advance are helping farmers to purchase, seed, soil amendments, and make farm repairs without going into their savings or incurring debt. Farmers receive the needed capital for sustaining their farm and the CSA shareholder contributes to “their” farmer being able to farm. CSAs represent commitment and a willingness to share in the responsibility to farm, but there are no guarantees. The harvest could be lost and with it the shareholder’s investments. Low-income, food-insecure families cannot afford take that risk.

The goal of this project was to see to what extent CSAs could address food security for low-income households participating as shareholders. We focused our attention on the low-income households and small-scale farmers in the Piedmont region of North Carolina. The objectives of the study were: 1) to develop a CSA arrangement that would allow low-income households to have access to fresh local produce weekly; 2) for low-income subsidized shareholders to become part of a “farm community” with other farmers, and shareholders; 3) to strengthen their knowledge of farms, seasonality of local produce; and 4) to encourage a varied diet and cooking practices that would use the fresh local farm products provided. We hoped the project would help alleviate some economic strain during the summer;

however, solving food insecurity was not an expected outcome. Moreover, we hoped that a connection between the urban and rural would develop, forging ties of a social food network in the spirit of civic agriculture. In the following sections we describe the CSA design and the lessons learned from this approach.

### **Methods: Tailoring the CSA Arrangements for Farmers and Low-income Share Recipients**

Knowing that low-income households could not afford to pay months in advance for farm fresh products, we needed an alternative source of funding. The North Carolina Department of Agriculture Food Policy Council provided a grant of \$21,500 of which \$20,000 was used to pay farmers for CSA shares that were to be distributed to low-income households.

#### **Farmers**

Local farmers were an essential part of this CSA project. Farmers experienced with direct marketing at farmers markets or with CSAs were encouraged to take part in this project. Word of mouth and telephone calls were also used to recruit farmers. Letters were sent to fifteen local farmers who met the project's criterion of using sustainable agricultural practices according to the principles of the CSA-USA (Henderson and van En 1999). Interested farmers were asked to submit to the PGL office brochures outlining the types of produce they grew, the number of weeks they provided shares, share cost, drop-off locations, and other pertinent information about their farm's CSA arrangements.

Ten farmers from nine counties responded and all were accepted to participate in the project based on their commitment to the project's goals. Farmers were asked to commit to pre- and post-harvest interviews that allowed for project evaluation. Each farmer was paid up to \$2000 for multiple shares in their CSA. Shares were purchased for low-income households, with the actual number of shares purchased per farmer varying depending on the farmer's established price structure as outlined in their brochures.

In a face-to-face pre-harvest interview, a semi-structured questionnaire was used to elicit information about farming and marketing practices, experience with CSA arrangements and expectations of this CSA project. All ten participating CSA farmers were interviewed at their farms before the distribution of CSA shares. In all cases in which a husband and wife team operated the farm, which was eight out of ten farms, both farmers participated in the pre-harvest interview. At the end of the season, the ten participating farmers were interviewed a second time using a

post-harvest semi-structured questionnaire. Information was obtained about their experience during the growing season and their experience with this CSA project. The information gathered from the two interviews was augmented with weekly, informal conversations at local farmers markets and telephone conversations. Farmers voluntarily phoned in and staff phoned others whom they had not heard from on a biweekly basis to obtain reactions to the project. This growing season farmers endured an extremely unpredictable weather pattern. During their initial planting and direct sowing period the farmers faced an incredible drought, going for nearly six weeks without much precipitation and having to irrigate regularly with well water. This protracted dry spell ended abruptly with an unusually wet growing period with more than 20 inches of above normal rainfall. The season ended with a hurricane, making 2003 one of the more unbalanced growing seasons in recent memory. Farmers are used to extremes in rainy or drought conditions, but facing both in a single season was a challenge for them.

### **Shareholders**

To identify households that would benefit by taking part in this project, flyers outlining the project were distributed through local faith-based nonprofit organizations, Health and Human Service agencies, WIC offices and other organizations that assist low-income populations. These flyers doubled as application forms for potential families. Interested applicants were encouraged to contact PGL by either sending in the application or contacting the office directly.

### **Shareholder Criteria**

To be accepted for the program, applicants had to meet four criteria. First, they had to have qualified for federal food assistance programs. Second, they had to live within five miles of a participating farm or farmer's drop-off site. Third, they had to have access to a reasonably well-equipped kitchen so that the fresh produce provided could be properly prepared. Lastly, they had to agree to participate in pre- and post-harvest interviews.

A total of 44 households (174 individuals) were selected for the project: 26 households from Guilford County in the central part of North Carolina and 18 from four neighboring counties. More applications were received than the available "share" space. The additional applications were put on file and served as replacements when other families were unable to continue with the project. Nine of the original forty-four families did not complete the CSA project and four replacement families were found. Given the terrible weather conditions farmers

faced this growing season, we decided not to burden farmers with the other five replacements, for the farmers were truly struggling to fill the existing shares. Under “normal” circumstances not filling a share would have been akin to a CSA shareholder who went on vacation or moved away without a refund and forfeiting their shares. In other words a replacement would not have been sought by the farmer. A total of thirty-nine families completed the project, receiving harvest shares during the summer months.

Shareholders were asked to record their CSA experiences in a food journal provided for them and to return comment cards from farmers that would accompany their fresh produce. The food journals and comment cards were used to augment the data collected in the pre- and post-harvest interviews. Midseason, families were contacted by telephone to gather additional reactions to the project. Questions were asked about the delivery system, the quality of the food received, and their knowledge of the items in the share bag/box, what they did with the food they received. This mid-way evaluation provided information on what was happening during the deliveries and gave us an opportunity to provide information to the shareholders with respect to their harvest shares. For example, one shareholder said she had received a bag of nuts (pecans) she had never seen before and we could explain what they were and teach her how to process them.

Out of the 39 households that received a CSA share for some time during the project, only 22 (56%) were available for a post-harvest interview designed to elicit information about the shareholders’ experiences with the CSA project, meetings with farmers or visits to farmers markets, changes in their shopping, cooking, and eating habits. Phone numbers had been changed, families moved away, or the shareholders’ schedules were unforgiving, leaving us to interview those who were willing to participate in the last segment of the project.

### **Educational Materials**

All shareholders were provided with information about the farm where their CSA produce shares were grown. They were encouraged to contact “their” farmers and to participate in any farm-sponsored events. Families were also encouraged to visit local farmers markets and were provided information on farmers-market locations, transportation options and schedules.

A CSA Food Guide was created and distributed to participating farmers and shareholders. This guide provided information on the produce that might have been found in their shares and included color photographs, a brief explanation of the items, and some quick and easy recipes. Because some items received in the shares

could be new to the project participants, the guide was to help families with the fresh produce items.

### **CSA Share Distribution**

Food assistance programs must address issues of transportation and food preparation to meet the needs of the most vulnerable (Guthrie and Lin 2002). For this CSA project we incorporated a delivery system that helped those with no easy access to transportation to get to the location of their share – be it at a farm, farmers market or alternative drop-off site. Often such locations were not on a bus route or shareholders were working or sleeping after completing the third shift when the shares were available at the drop-off sites. The Society of Saint Andrews, a gleaning ministry, helped to coordinate the volunteers who agreed to deliver the produce to shareholders each week.

It was decided to use one farmers market in Guilford County as a central location drop-off site because five of the farmers sold at this market. Shareholders and volunteer drivers came to the farmers market for the share pick-up. Four delivery routes were created to minimize the distances volunteers had to drive between shareholders, all of whom lived within a five-mile radius of the farmers market. In the Guilford County area, a new driver would take over one distribution route every few weeks. Feedback was collected from volunteers to monitor the delivery system. Numerous hours were spent by PGL staff redoing distribution schedules, and accommodating summer vacation schedules, absent volunteers, and volunteers using out-of-date delivery lists (recall some shareholders dropped out).

The other five farmers were in four counties within the Piedmont region of North Carolina, southeast of Guilford County. The farmers in this region were not close to one another or to a central market that many shareholders could visit. Shareholders and two volunteer drivers came to the farm or the farmer's drop-off site to pick up the harvest shares. Their system worked well and there were no logistical issues in their distribution system. All volunteer drivers received a thank-you letter for their support and a certificate of participation in the CSA project.

### **Who the Project Touched**

From the beginning to the end of this CSA project a total of 32 families had received weekly deliveries while another 16 picked up directly at farmers market or other designated location (total numbers include the replacement shareholders). With the addition of approximately 20 delivery drivers over the summer growing

season and the 10 farming families, more than 200 people were exposed to farmers, farmers markets, and fresh locally grown produce.

### **Analysis of Pre-and Post- Harvest Interviews for the CSA Project**

Participating households varied in the length of time for which they received shares and the time they stayed with the project. The households selected to receive shares once a week lasted from 1 to 30 weeks over the spring, summer and fall seasons. The length of the CSA arrangement depended on the farmer's growing and marketing season, and how long shareholders stayed with the project.

### **Shareholders**

An average of four people were fed from each CSA share, ranging from a single individual up to 10 people in one household. The age range for a household was from newborns to 80 years of age; obviously only some members benefited from direct consumption of the farm fresh products. The average age of the adult shareholder was 36 years and the average age of the children was 6 years. Before participating in this project, most of the shareholders had been accustomed to buying frozen or tinned fruits and vegetables because of limited budgets, time constraints and extended product shelf-life. Approximately 80% of the shareholders relied on a taxi service to supply their households with food. Three-quarters of the shareholders did not know a farmer and 43% had never been on a farm. However, 93 percent of the shareholders had been to a farmers market at least once.

Among the low-income shareholders many were veterans of the WIC, Food Stamp, or other federal programs. Eleven shareholders had been WIC recipients. Fourteen households had sought out emergency food assistance from churches, emergency food banks or the Salvation Army in the six months before this project. In addition, several families were new to poverty and food assistance programs, having only recently experienced job loss, serious health problems, or divorce.

Of the twenty-two shareholders who participated in the post-harvest interviews, 15 had their shares delivered and seven picked them up from designated sites at farms, churches, or local farmers markets. In all, 21 strongly agreed or agreed that they had received their shares without any difficulty. Ten of the families strongly agreed or agreed that the shares always had more food in them than they could eat; five disagreed, saying they had big families and had no trouble eating all the food provided. Families who were unable to consume everything in the weekly share bag said they either froze items or gave them away. One shareholder even pureed the extras for her dog.

During this CSA project several shareholders skipped meals or went for a whole day without food. In one household, this occurred once a month, in another once a week. Another household experienced a lack of food for her and her children because her husband worked five hours away during the week and she had no transportation while he was on the job. One shareholder still had to choose medicine over food at least twice during this project.

### **The Share Experience: Changes in Food Selection and Home Meals**

Although we expected that some items in the shares would be new, 16 shareholders (72%) strongly agreed or agreed that they always knew what all the items were that they received in their farm share. Most of those interviewed also said that they knew how to prepare the items they were given. Any questions they had about items were easily answered by their farmer, a quick call to our office, looking it up in a book, asking friends, or by looking in the CSA Food Guide provided to them at the beginning of the season.

Changes in shopping, cooking and eating habits were also discussed in the post-harvest interviews. Twenty shareholders (91%) of those completing the post-harvest interview said they spent less money because they did not have to buy as much produce. Five shareholders said they began to shop at different places - such as co-ops, farmers markets, or stores with better quality produce - to be able to purchase more fresh produce. Shareholders commented on how they purchased different fresh items such as salad greens, arugula, beets, squash, okra, and radicchio. Another couple insisted on organic produce while others spent more money on meat, fruit, and seasonings to use with the items provided in the shares. Others bought less meat and focused more on fresh vegetables in their diets. Overall, we heard shareholders talking about their fresh produce, creating new recipes and sharing meals made from their harvest shares with family and friends.

While price was still a priority for six shareholders when buying groceries, quality and freshness were reported by twelve shareholders to be a bigger factor in their decision-making process for what to buy. However, those who were spending money differently on food for their household commented this was due to the fact they were buying more fresh produce to supplement the shares because their families liked the items so much. In fact, one shareholder reported buying more vegetables for stir-fries, while another was buying different lettuces for her mother who had previously refused to eat them because they upset her stomach; her family began to eat salads daily.

Meal planning among the families changed during this project in several ways. While eight shareholders said there was no change in their meal planning, the other fourteen said they tried to make something new every week from the share. They made up recipes off the tops of their heads or tried to have more variety in their meals, including more colors and textures on their plates. Nineteen households said they changed to using the different ingredients regularly. For example, one family kept their meal plans open on Wednesdays because they wanted to see what surprises were in that week's share.

Overall, shareholders reported that they were cooking with more vegetables and were experimenting more with their diets. One woman said she had "learned not to cook vegetables to death." She became a huge fan of stir-fry dinners and was playfully nicknamed "the stir-fry lady." A few said they did not like to cook; most said they always liked to and were even more excited about cooking from scratch with the fresh ingredients. Two women reported significant weight loss during the project and one said her doctor sent a 'thank you' to us and the farmers for helping keep her on track.

Shareholders recognized the difference in taste and appearance from the store-bought produce they might have purchased from the farm fresh produce they found in their shares. Almost everyone agreed that the share items tasted better because they were freshly picked. Tomatoes, beans and salad greens were the favorite vegetables of the season, but many shareholders also loved the greens, squash and okra. Several calls were received about this "smelly green thing" which was later discovered to be basil. Swiss chard was another item that many families did not know how to prepare and another shareholder called to ask about the "red round things" in her bag. These turned out to be radishes, something she had never encountered before this project.

A single mother compared receiving her share to Christmas morning, saying she could not wait to see what she was going to get. She also admitted to being like a kid in a candy store with the fresh food, she was especially fond of fresh cucumbers. Another household had a Saturday morning ritual where the family cooked pancakes with the eggs they received. While the kids took each item out, they exclaimed "My farmer made this for me!" as they snacked out of the box. Another shareholder said that her children would have half the food eaten right out of the share bag before she could get it home. She watched them in the rearview mirror gobbling down cherry tomatoes as she drove home from the pick-up site.

### **Transportation to the Pick-up Sites**

From the beginning only 16 households picked up directly from the farmer at the pick-up site or at the farm. Those who did not meet their farmer said they had trouble with transportation, busy schedules, bad health, or claimed they did not know where the farm or farmers market was. Families who picked up their own shares had an easier time connecting with “their” farmers and some of them forged friendships. In fact, two farmers wanted to continue with several participants in their next year’s CSA. Nineteen shareholders did not visit the farm but stated they had planned to attend work days. Unfortunately, all of the workday activities were cancelled on the ten farms due to the varied weather experienced in 2003. Only one farm held a potluck dinner at the end of the season for all of their shareholders, which one of the three shareholders assigned to that farm attended.

### **Impressions of the CSA Experience**

#### **Shareholder**

All of the 22 households who participated in the post-harvest interview stated that they enjoyed participating in the project. Comparing comments from the pre-harvest and post-harvest interviews reveals that shareholders had few expectations at the beginning of the project. Most expected to receive food every week while others wanted to learn more about farming. When asked if their expectations were met, fifteen shareholders replied yes. The ones who answered no to this question commented that they wanted the project to last longer, while others commented they had expected to get more fruit or that the freshness of their share was not always the best. Others who said their expectations were not met stated that they wanted to learn more about how to prepare and store the items they received, especially the more perishable items such as the salad mixes and greens.

Overall these shareholders were appreciative for the assistance they received in reducing their grocery bill by receiving a CSA share. While some participants did learn a little about how food was grown, they all learned how much better produce tastes when it is fresh from the farm. One woman stated she was “amazed at how much better fresh green beans were than canned ones.” Health benefits were experienced by shareholders who were on strict diets ordered by their physicians. These families reported having an easier time staying on their diets because of the weekly variety provided in the CSA share. The dedication indicated by one shareholder was admirable. She walked to the pick-up site every week to get her share, carrying the heavy box back home to an apartment where the power was shut off for two months. She worked out an arrangement with her ex-husband so that

she and her daughter would have a place to store and prepare the foods she received. Although there was extra effort on her part, she remained excited about the fresh produce provided.

### **Food Journals**

Regrettably, only seven households returned the personal food journals provided to them when the project commenced. However, the information in these few journals provided insights into the shareholders' experiences in the project. One journal, along with the small girl holding it, was smeared in hummus when it was picked up. Her family wrote the following:

Last night, told the three-year-old that the leaf lettuce salad and the greens came from the farmer. He said "Thank you, farmer!" and he turned to them and said "mmmm." He was being loud too when he said it and smiled...I love when he gobbles down broccoli but he doesn't always. Sometimes he acts picky about the veggies, but I think the idea that they are from a NC farmer who grew them for us makes him more willing to eat. If that's the case—whatever works!

Another journal included recipes that the family made up from their share items. Another reported in her journal that she was especially fond of the lettuces, saying

I loved the lettuces! Especially the baby greens. I tend to have problems digesting raw leafies, but I didn't with these. Also, prior to serving the farmer's lettuces, my father and I knew not to give my mother anything green. She would pick the smallest leaf out of any sandwich. Now she eats whole salads.

What is significant in these comments is that they reveal positive responses to the CSA experience. In varying degrees families learned about local fresh produce and to prepare what they received. They learned what they liked and did not like and they shared food with family and friends. They broadened their friendships to include their food providers – the farmers and the volunteers who delivered the CSA shares and the people with whom they shared their food. A sense of community was uniting urban and rural households around food and agricultural experiences – the outcome desired by civic agriculture.

**Transportation/Distribution**

Many volunteer delivery drivers expressed their appreciation for having been introduced to the farmers and the households receiving the CSA shares and wanted to know how they could help the following season. One family in particular, a mother and her two grown daughters, was very enthusiastic members of the delivery team. Every Saturday morning, they would come to pick up the shares to be delivered, leaving enough time to shop for themselves. They loved the people they delivered to and spent time during the week helping a few of the recently settled immigrants get accustomed to the area.

**Farmers**

All of the 10 farmers participating in this project had experience with direct marketing. Some of their experiences had been at farmers markets, selling to restaurants and other venues, including CSA arrangements. The years of experiences farming and marketing to the public ranged from 5 to 25 years. Three farmers were new to the CSA approach, but wanted to use this opportunity to test it as alternative to what they had been doing. Four years later, two of these continue operating a CSA, now supplying 25 households with their farm's fresh produce.

**CSA Share Arrangements**

Four farmers provided 20 weeks of fresh produce, five provided 25 and one provided 30 weeks. Some farmers offered only full-shares that often fed a four-person family three to four days (if they are not vegetarians), while others offered half and full-shares. A half-share is better suited for smaller householders. Experienced CSA farmers had from 11 to 92 shareholders before the project. For three farmers this was a new experience; one took on three shareholders, another five and another six as way to learn how the CSA could enhance their farming and marketing experience. The other farmers with CSA experience supported three to seven subsidized full shares besides their non-subsidized shareholders, and two farmers supported an additional half-share each. The price for the shares ranged from \$300 to \$570, varying in the quantity of items a share might contain, whether any of the items were heirloom varieties, and the number of the weeks shares were provided. The weekly value for a 20 or 30 week share (if sold at a farmers market) averaged from \$15 to \$19, depending on the particular share arrangement.

Farmers planted many more seed varieties during the growing season than they could harvest because of the weather. During the season farmers provided on

average twenty different food items to their shareholders, including a variety of lettuces, greens, radishes, tomatoes, eggplants, figs, strawberries, okra, beans, beets, carrots, squash, melons, corn, collards, cucumbers, basil etc. What interfered most with the farmers this growing season was the weather. Five of the farmers had to forgo a week's delivery for all of the shareholders (subsidized and non-subsidized). One farming household commented during the post-harvest interview that it was "a good but difficult season; it was the hardest we've had in 15 years. Everything just washed away. It was like farming for the first time." Another commented that "it was a disaster. Working with a drought was better, but we learned about what to do in the rain." Lastly another described their season. "It was a little tough. We didn't get the tomatoes or the yellow squash. Actually, we're just getting our first yellow squash now, in November. My lettuce has all bolted for some reason, dry then wet, cold then hot, cloudy. Oddly enough, last year was better. With a drought I could add water but I can't take it away. When the transplants are ready and the fields aren't, you have extended time in the trays which is a problem and plants get stressed."

Nevertheless the farmers were very much committed to the project and to sharing local fresh farm products to low-income households. They were sensitive to their low-income households, food needs and went to great lengths to provide for those households. For example, one farmer commented "I loved the idea of it. When I packed the bags, I thought of what they would like--eggs or arugula? The average customer is well off and doesn't care. I tried to be good to my PGL shareholders." Another stated "It was a little bit different dimension but it was nice. Some of the pilot project shareholders work in landscaping and they couldn't believe that we didn't use any chemical fertilizers and still had such nice stuff. The other folks we saw every week and they had never dealt with organic produce at all and they were very appreciative and really liked everything." However, not everyone had such a positive outlook on the project.

### **Farmers' Impression of the CSA with Low-Income Households**

We asked farmers to comment on how the project affected them. There were good, bad and neutral comments. For example, one farmer stated, "It's been a really good thing, you put a lot of volunteers to work and a lot of people benefited from it getting fresh food." Another farmer did not sense any impact either way with this project. They stated, "I didn't feel much effect by it. I was so busy and stressed out this season. I got comment cards out but I never had time to put them in the boxes. I feel like I didn't have time to put into it really. I also didn't have much contact

with them. It was a nice idea but it didn't affect me too much." Another farmer sums it up commenting on the project by saying

[it was] good and bad. I was surprised when some didn't show up. It looks like they would have been there every week for free food but it's not for everybody. Some who pay out of their own pocket never show up either. It worked better with deliveries being done by Bruce [a volunteer driver], at least we know those people got their food. But I think it's a lot to ask to both pay for it and deliver it to them. I think the program is worthwhile though since you're tapping into a demographic that is not usually part of the CSA culture. Maybe they don't feel comfortable doing it or eating organic isn't important to them. It isn't convenient to eat organic. I applaud the effort but I'm not sure if it's right for some of those people. But the one that you added at the end of the season was the first to be there every week and she loved it.

Overall the experience for farmers was positive. When asked if they would have a CSA the following year all of the farmers replied they would, even those new to having a CSA.

### **Project Outcomes/Discussion**

The accomplishments of this CSA project can be evaluated in several ways. From the post-harvest interviews and informal data gathered from participants (farmers, shareholders and volunteer drivers), it seems that the project made a difference in people's lives, at least for the duration of the CSA distribution period. Weekly harvests were pre-sold, grocery bills were lowered, people were eating fresh, locally-grown, seasonal produce, and picky kids and parents were introduced to items they say they were buying regularly at the end of the season. Two shareholders said they would be interested in purchasing their own CSA share when they were back on their feet financially.

Although this project did provide fresh produce to low-income, food-insecure households, it did not satisfy their food needs as evidenced by those households who still went without food or had to make a choice between food and medicine. For these food insecure households, the CSA shares made a small dent in their food access problems, by providing only marginal assistance for those households that were most food insecure. In this respect the CSA arrangement as designed here did not end food insecurity among these households, nor was this expected. A CSA

share is intended to supplement one's produce needs, but will not be of sufficient quantity to satisfy all of the household's food needs (Henderson and Van En 1999).

This CSA design was unusual. Outside funding was obtained to prepay farmers to feed low-income food-insecure households who would not otherwise have become CSA shareholders. Drivers were arranged for those unable to get to drop-off sites to pick up their farm shares. Essentially an attempt was made to remove all the barriers to food access of fresh farm products. The concept behind the project was to introduce low-income, food-insecure households to another source of fresh farm products. Likewise this project was designed to open a new market for local small-scale farmers (without incurring risk) by connecting them to other members of the urban community - the food-insecure households. In each case information was exchanged, learning occurred and some relationships were forged around the social food network. The relationships might not have been with the farmer or the delivery person, but around the food itself - the sharing of fresh, local products with friends and family.

Farmers who rely on CSA arrangements as part of their marketing strategy also use this opportunity to share the risk of their farming with shareholders - a learning experience for all. Unfortunately it was an extremely dry and wet growing season, which included above normal rainfall from Hurricane Isabel. The financial assistance from shareholders who prepaid benefited the CSA farmers. Although farmers had a difficult time providing bountiful shares as they were accustomed to in past years due to the rain, mold, fungi, bugs, and weeds, they did succeed in having enough to provide weekly fresh farm products for the project participants. When the produce varieties expected by the farmers were foiled by an extremely wet season, farmers turned to distributing items such as baked goods, cheeses, canned preserves and pecans from their personal reserve to supplement the shares for the shareholders in this project. Supplementing shares is not a standard practice in CSA arrangements, but participating farmers were dedicated to providing for the low-income shareholders. The shareholders considered these items unexpected bonuses. Low yields and the limited variety stemming from not enough rain and too much rain, as was seen in 2003, served as an opportunity for shareholders to learn of the challenges faced by farmers.

The post-harvest interviews indicate that providing weekly fresh produce to the participating shareholders altered their eating, shopping, and cooking habits during the project. Shareholders enjoyed being part of the CSA project. Several wanted to know if this project would be available the following year and how to sign up for it if it were renewed. As previously mentioned, shareholders were appreciative and

thanked us and the farmers for helping them with their grocery bills, introducing them to new foods they enjoyed, and for helping their families eat healthier.

The families that shared in this project did not report the same experiences as the low-income participants in the studies by Nord et al. (2003) and Hamilton et al. (2001) such as low variety in their diets, difficulty with shopping due to location of appropriate supermarkets, no transportation, and lack of child care and free time. Following the reports made by Bradbard et al. (1997) and Hoisington et al. (2002), our participants admitted that they believed eating a healthier diet was too expensive. However, by the end of this CSA project, those who had stayed on said they were eating a wider variety in their diets and with the delivery system in place for some, they were provided the access to fresh produce they may not have had before. Even the children who were initially insistent on junk food were now eating cherry tomatoes and fresh corn with enthusiasm.

### **Lessons Learned**

Many lessons are learned from a project of this nature, some of which we will delineate here. First, this project would not have been possible without outside funds to purchase the CSA shares and provide drivers for food delivery. Sustainable participation in CSAs by low-income families would require a different strategy, as we suggest below.

Second, the geographical area we covered for this project was too large to stay on top of production, distribution and consumption effectively always. From a staffing perspective, staying more local would minimize some logistical difficulties, such as problems with delivery schedules and updated direction lists for existing shareholders. Shortening the distances between participants and drop-off sites would make it easier to keep up with the needs of both the farmers and the shareholders during the season. As it was, the project covered nine counties with the furthest farm and drop-off site being nearly two hours away from the Project Green Leaf office. A more streamlined delivery system needs to be developed to ensure easier access to the harvest shares for the limited income shareholders. However, an improved system should still encourage shareholders to interact directly or meet their food providers—the farmers.

Inherent in direct marketing is the link between farmers and consumers. In a CSA arrangement there is no intermediary between the farmer and the shareholder. A problem with this project was how to bring the low-income shareholder to the farm, farmers market or CSA drop-off site to meet the farmer, and we failed to overcome this distance barrier. To compensate for the lack of face-to-face

communication, farmers relied on newsletters, weekly notes attached to the shares or through email for those who had access to a computer—such as a library’s computer.

Some concerns were voiced by a few of the farmers who were in similar financial straits as their low-income shareholders and were struggling to make ends meet for their own families. If shareholders did not show up to collect their shares or if they complained, some farmers took offense. However, they admitted that even their paying shareholders were known to do the same. Nevertheless, the farmers made some valid points and a useful recommendation, namely that some kind of commitment structure or incentive should be established for share recipients to participate more fully in a CSA arrangement and to complete a project of this nature. Not participating in the post-harvest interviews or filling in the journals posed a significant problem for evaluating the project. As farmers pointed out, these shareholders had nothing invested in the project and therefore saw no reason to honor these requests. As a result, their commitment to the philosophy of a CSA was lost or not fully appreciated. In some, although not all cases (as evidenced by the qualitative comments reported), farmers and shareholders interpreted a share bag as a weekly bag of free food. However, to create a more sustainable project in a subsequent year, families could be asked for weekly repayment, with the project advancing the upfront payment to the farmer and contacting organizations to assist with transportation to farms and distribution of the shares.

Farmers suggested that shareholders be required to participate in some activity at the farm every couple of weeks to ensure their commitment to the philosophy of a CSA. A problem with this suggestion, however, is that this population has limited access to transportation and complicated work schedules. Also, such requirements are not enforceable among the “traditional” shareholders. Bus access to rural areas is nonexistent and round-trip cab rides would be cost prohibitive. Recall that nearly 80% of the original shareholders in this project took a cab to get their food provisions, hence, the need for the twenty volunteer drivers.

Farmers were helped financially during a particularly dry and then extremely wet growing season. They commented that the shares purchased by this project helped them by providing a preset market for their produce. Several farmers made connections with their shareholders and two said they were asking some of their shareholders to participate the following year, even without the financial support of this project. The farmers appreciated the enthusiasm and dedication of the participants and wanted to help them again in any way they could. Participating

farmers considered the project to be a success and said they would like to participate again should similar funds be available the following year.

Having arranged a class for the shareholders to learn about food preservation and cooking techniques would have been useful. Many shareholders expressed interest in this type of class but we were unable to coordinate one due to problems with transportation and finding a time when shareholders could meet with a county extension agent who offers such classes. The post-harvest interviews indicated that a few shareholders were disappointed they could not have learned more about how to cook new items and keep them fresh longer. The CSA Food Guide provided to the families acted as a guide for identifying and explaining items that may have appeared in their shares. Some recipients said they would have liked to have seen more kid-friendly or quick and easy recipes included in this CSA Food Guide.

Another suggestion from the shareholders was that they would like more variety in their CSA share. Unfortunately, the weather prevented the farmers from producing the variety they planned on this season and not much could have been done to ameliorate this problem. However, the project or the letters from farmers might have educated the shareholders better on the link between weather, harvest variety, quantity and quality.

### **Conclusion/Project Summary**

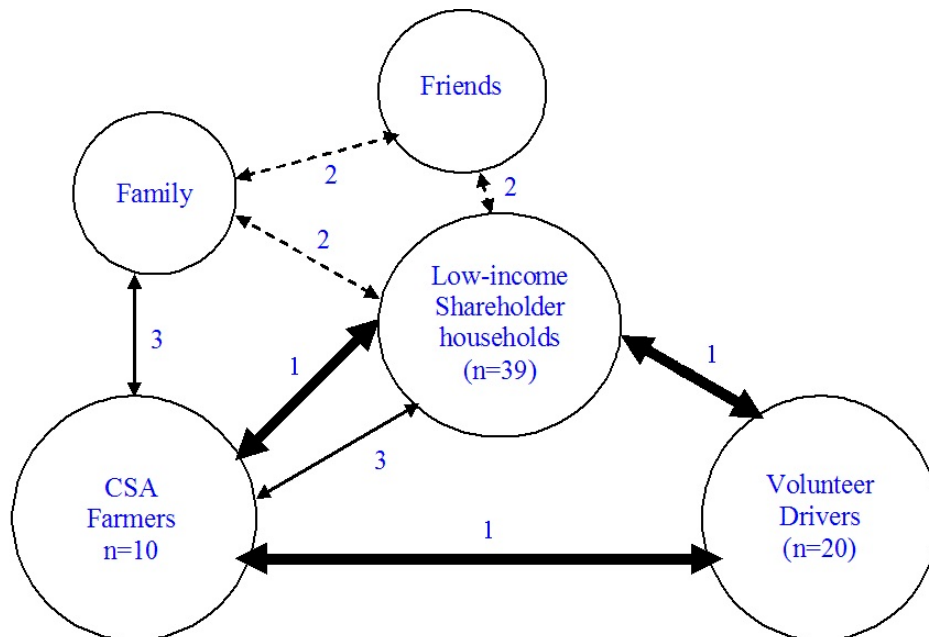
Applied social scientists use their expertise to influence project designs that provide assistance to communities and individuals. While local agri-food networks, community-supported agriculture projects, rural poverty and food insecurity are not new topics, this paper illustrates how building relationships between some of the most vulnerable farmers and consumers is possible. Our discussion describes some complications and accomplishments of establishing networks between poor consumers and local producers. This CSA project was an attempt to build community through food access, by enabling low-income households to participate in a CSA and make a difference in eating habits during the weeks produce shares were received.

As Lyson (2004) and others who have been involved in civic agriculture recognize, such alternative food institutions are locally grounded. Lyson (2004:63-64) states, "Civic agriculture is a locally organized system of agriculture and food production characterized by networks of producers who are bound together by place. Civic agriculture embodies commitment to developing and strengthening an economically, environmentally, and socially sustainable system of agriculture and food production that relies on local resources and serves local markets and

consumers.” One central element of civic agriculture is the emphasis placed on community and new relationships. “The direct contact between civic farmers and consumers nurtures bonds of community. In civic agriculture, producers forge direct links to consumers rather than indirect links through middlemen (wholesalers, brokers, processors, etc.)” (Lyson 2004:85).

The project discussed in this paper is all about forging new relationships around a food connection. The project established three primary links illustrated by the bold lines numbered “1” in Figure One. The project brought together low-income shareholders directly to the participating CSA farmer or by way of a volunteer driver, thus bridging a rural and urban divide. The shareholder household might have had previous ties between friends and family illustrated by lines marked “2.” However because of this project, friends and family were tied together through a social food network where they learned of new foods and methods of food preparation, as illustrated by the shareholder who earned the nickname “the stir fry lady” by her friends. Because of the project new relationships were created between low-income household members, their families, and farmers, noted with the lines marked “3.” For those families able to visit the farms and meet the farmers and their families, a new sense of community began.

FIGURE 1. A SOCIAL FOOD NETWORK CREATED FROM CIVIC AGRICULTURE



By stressing self-reliance and empowerment and providing education about foods products they may have never seen before, this project seemed to enable families to make different choices at grocery stores and farmers markets. As one shareholder reported “next year, I want to help you do this with others instead of being a recipient.” She said she had learned about giving and was ready to return the favor to her community. Her comment indicates that with the right assistance, civic agriculture can come full circle despite income.

Equally important, this project indicated that CSAs do not have to be limited to those who can afford to prepay for fresh farm produce. Future planning with federal and state assistance agencies and their food programs might lead to alternative food institutions being further modified to help both small-scale commercial farmers and low-income households share in the seasonal harvests.

Continuation and expansion of this project could help to change the eating habits of low-income families by introducing them to alternative food institutions and cooking with farm products. This could have an especially important impact on children’s food choices, by helping to create a preference for fresh food early in life, thus reducing the preponderance of high-carbohydrate, high-fat prepared foods that are such a prominent feature of the diets of low-income families (Hamilton et al. 2001). The problem is that today’s agriculture production and food marketing systems create substantial barriers between low-income families and the food that may be available in their communities. Our project demonstrated that those barriers can be overcome with sufficient resources of time, effort and organization. If a long-term strategy for improving the dietary health of low-income Americans is a worthwhile civic goal, investment of those resources may be a necessary step on the road to attaining it.

### References

- Allen, P. 1999. “Reweaving the Food Security Safety Net: Mediating Entitlement and Entrepreneurship.” *Agriculture and Human Values* 16(2):117-29.
- America’s Second Harvest - The Nations Food Bank Network. 2007. “*Hunger and Poverty Statistics*.” Retrieved September 7, 2007 (<http://www.secondharvest.org>).
- Andreatta, S. 2000. “Marketing Strategies and Challenges of Small-Scale Organic Producers in Central North Carolina.” *Culture and Agriculture* 22(3):40-50.
- \_\_\_\_\_.2006 “Urban Connections to Locally Grown Produce.” Pp. 117-40 in *Urban Place: Reconnecting with the Natural World*, edited by Peggy F. Barlett. Cambridge, MA: MIT Press.

- Bradbard, S., E. Michaels, K. Fleming, and M. Campbell. 1997. "Understanding the Food Choices of Low Income Families: A Summary of Findings." Microfilm SUDOC #A98.2:L95. Washington, DC: U.S. Department of Agriculture.
- Briefel, R., J. Jacobson, N. Clusen, T. Zavitsky, M. Satake; B. Dawson, and R. Cohen. 2003. *The Emergency Food Assistance System—Findings from the Client Survey, Executive Summary*. Food Assistance and Nutrition Research Report #32. Washington, DC: U.S. Department of Agriculture.
- Buttel, F.H. 2005. "Ever since Hightower: The Politics of Agriculture Research Activism in the Molecular Age." *Agriculture and Human Values* 22:275-83.
- Cone, C. A. and A. Myer. 2000. "Community Supported Agriculture: A Sustainable Alternative to Industrial Agriculture?" *Human Organization* 59:187-97.
- Cook, C. D. and J. Rodgers. 1997. "Community Food Security: Growing Back to the Earth." *Earth Island Journal* 12(4):30-2.
- DeLind, L. 1999. "Close Encounters with a CSA: The Reflections of a Bruised and Somewhat Wiser Anthropologist." *Agriculture and Human Values* 16:3-9.
- \_\_\_\_\_. 2002. "Place, Work and Civic Agriculture: Fields for Cultivation." *Agriculture and Human Values* 19:217-24.
- Devine, C.M., M.M. Connors, J. Sobal, and C.A. Bisogni. 2003. "Sandwiching It In: Spillover of Work Onto Food Choices and Family Roles. In Low- and Moderate-Income Urban Households." *Social Science and Medicine* 56(3):617-30.
- Dollahite, J., J.A. Nelson, E.A. Frongillo, and M.R. Griffin. 2005. "Building community capacity through enhanced collaboration in the farmers market nutrition program." *Agriculture and Human Values* 22:339-54.
- Drewnowski, A. and A. Barratt-Fornel. 2004. "Do healthier diets cost more?" *Nutrition Today* 39:161-8.
- FAO (Food and Agriculture Organization of the United Nations). 2006. *The State of Food Security in the World. Eradicating Hunger—Taking Stock Ten Years after the World Summit*. Retrieved September 10, 2007 (<ftp://ftp.fao.org/docrep/fao/009/a0750e/a0750e00.pdf>).
- Gibson, E. 1994. *Sell What You Sow! The Grower's Guide to Successful Produce Marketing*. Auburn, CA: New World Publishing.
- Goland, C. 2002. "Community Supported Agriculture, Food Consumption Patterns and Member Commitment." *Culture and Agriculture* 24(1):14-25.
- Goodall, J. with G. McAvoy, and G. Hudson. 2005. *Harvest for Hope: A Guide to Mindful Eating*. New York: Warner Books.
- Grey, M.A. 2000. "The Industrial Food Stream and Its Alternatives in the United States: An Introduction." *Human Organization* 59(2):143-50.

- Guthman, J., A.W. Morris, and P. Allen. 2006. "Squaring Farm Security and Food Security in Two Types of Alternative Food Institutions." *Rural Sociology* 71(4):662-84.
- Guthrie, J.F. and B.H. Lin. 2002. "Overview of the Diets of Lower and Higher Income Elderly and their Food Assistance Options." *Journal of Nutrition Education and Behavior* 34(1):31-42.
- Halweil, B. 2002. "Home Grown: A Case for Local Food in a Global Market." *Worldwatch Paper #163*. Washington, DC: *Worldwatch Institute*. Retrieved January 11, 2005 (<http://www.worldwatch.org/pubs/paper/163/>).
- Hamilton, J.H., J. Anliker, J.C. Miller, R.M. Mullis. 2001. "Food Shopping Practices are Associated with Dietary Quality in Low-Income Households." *Journal of Nutrition Education* 33:S16-S26.
- Heffernan, W.D. and D.H. Constance. 1994. "Transnational Corporations and the Globalization of the Food System." Pp. 29-51 in *From Columbus to ConAgra: The Globalization of Agriculture and Food*, edited by A. Bonnano, L. Busch, W. Friedland. L. Gouveia, and E. Mingione. Lawrence, KS: University Press of Kansas.
- Henderson, E. and R. van En. 1999. *Sharing the Harvest: A Guide to Community Supported Agriculture*. White River Junction, VA: Chelsea Green Publishing Company.
- Hoisington, A., J.A. Shultz, and B. Butkus. 2002 "Coping Strategies and Nutrition Education Needs Among Food Pantry Users." *Journal of Nutrition Education and Behavior* 34(6):326-33.
- Kimball, A. 2002. *The Fatal Harvest Reader: The Tragedy of Industrial Agriculture*. Washington, DC: Island Press.
- Lee, J.S. and E. Frongillo, Jr. 2001. "Nutritional and Health Consequences Are Associated with Food Insecurity Among U.S. Elderly Persons." *Journal of Nutrition* 131:1503-9.
- Lieberman, T. 2003. "Hungry in America. Washington No Longer Feels it Ought to Insure that Everyone has Enough to Eat." *The Nation* August 18/25. pp. 17-22.
- Lyson, T. 2000. "Moving Toward Civic Agriculture." *Choices* Retrieved on April 4, 2008 ([http://findarticles.com/p/articles/mi\\_m0HIC/is\\_/ai\\_75714051](http://findarticles.com/p/articles/mi_m0HIC/is_/ai_75714051)).
- \_\_\_\_\_. 2004. *Civic Agriculture: Reconnecting Farm, Food and Community*. Medford, MA: Tufts University Press.
- Lyson, T. and A. Guptill. 2004. "Commodity Agriculture, Civic Agriculture and the Future of U.S. Farming." *Rural Sociology* 69(3):370-85.

- Maley, F. 2003. "Wilting Plants." *Business North Carolina* 23:26-28.
- Neault, N., J. T. Cook, V. Morris, and D.A. Frank. 2005. *The Real Cost of a Healthy Diet: Healthful Foods are out of Reach for Low Income Families in Boston, Massachusetts*. Boston Medical Center, Department of Pediatrics.
- Nestle, M. 2002. *Food Politics. How the Food Industry Influences Nutrition and Health*. Berkeley: University of California Press.
- \_\_\_\_\_. 2003. *Safe Food: Bacteria, Biotechnology and Bioterrorism*. Berkeley: University of California Press.
- Norberg-Hodge, H., T. Merrifield and S. Gorelick. 2002. *Bringing the Food Economy Home: Local Alternatives to a Global Agribusiness*. Bloomfield, CT: Kumarian Press.
- Nord, M. 2003. "Food Security in Households with Children." Food Assistance and Nutrition Research Service, Food Assistance Research Brief, July.
- Nord, M. and M. Andrews. 2000. "Putting Food on the Table: Household food Security in the United States." *Amber Waves* 1(1):23-9.
- Nord, M. and P.C. Brent. 2002. "Food Insecurity in Higher Income Households." Food Assistance and Nutrition Research Report #E-Fan-02-016. Washington, DC: U.S. Department of Agriculture.
- Nord, M., M. Andrews and S. Carlson. 2003. Household Food Security in the United States, 2002. Food Assistance and Nutrition Research Report #35. Washington, DC: U.S. Department of Agriculture.
- Ostrom, M.R. 1997. "Toward A Community Supported Agriculture: A Case Study of Resistance and Change in the Modern Food System." PhD dissertation, Institute for Environmental Studies, University of Wisconsin-Madison.
- Perry, A. and B. Emerson. 2007. "Food Stamps as Medicine: A New Perspective on Children's Health." Children's Sentinel Nutrition Assessment Program. February.
- Rosenbaum, S. 2007. "Federal Food Programs and the Public Health: Can All Americans Afford Access to Nutritious Foods?" GW SPHHS Rapid Public Health Policy Response Project. February. Washington, D. C.
- Schlosser, E. 2002. *Fast Food Nation*. Boston: Houghton Mifflin Company.
- Shiva, V. 2000. *Stolen Harvest. The Hijacking of the Global Food Supply*. Cambridge, MA: South End Press.
- Smith, J. 2003. *Seeds of Deception: Exposing Industry and Government Lies about the Safety of the Genetically Engineered Foods You're Eating*. Fairfield, IA: Yes! Books.

- Sullivan, A. and E. Choi. 2000. "Hunger and Food Insecurity in the Fifty States: 1998-2000: August Food Security Institute Report." Center on Hunger and Poverty, Brandeis University, Waltham, MA.
- U.S. Conference of Mayors. 2002. "*Other Information on Hunger and Homelessness.*" Retrieved September 10, 2007 ([http://www.usmayors.org/uscm/hungersurvey/2002/onlinereport/hungersources\\_121802.pdf](http://www.usmayors.org/uscm/hungersurvey/2002/onlinereport/hungersources_121802.pdf)).
- U.S. Department of Labor. 2003. "Bureau of Labor Statistics" Data. Retrieved January 12, 2003 (<http://www.bls.gov>).
- USDA (U.S. Department of Agriculture). 2002. "Household Food Security, 2001," released November, 2002. Retrieved September 6, 2007 (<http://www.ers.usda.gov/publications/fanrr29/>).
- \_\_\_\_\_. 2003a. USDA Food and Nutrition Service, Food Stamp Program (USDA FSP). Retrieved December 10, 2003 (<http://www.fns.usda.gov/fsp/>).
- \_\_\_\_\_. 2003b. USDA Food and Nutrition Service, WIC Program (USDA WIC). Retrieved December 10, 2003 (<http://www.fns.usda.gov/wic/>).
- Wells, B. and S. Gradwell. 2001. "Gender and Resource Management: Community Supported Agriculture as Caring- Practices." *Agriculture and Human Values* 18:107-19.